

## Yes, there is life after runoff!

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### Agenda

- I. Revenue drivers of a runoff (re)insurer
- II. Reserving process of a (re)insurer in runoff
- III. Commutation pricing considerations
- IV. Runoff consolidation

## Revenue drivers of a runoff (re)insurer

Alea

- No Premium income
- Revenues are driven by:
  - Investment income from invested assets
  - Active claim management (settling claims for an economic profit)
  - Favorable commutations
  - Acquisition of other runoff portfolios/legal entities

3

## Reserving process of a (re)insurer in runoff

Alea

- Annual fully fledged reserve analysis followed by quarterly Actual vs. Expected (AvE) reserve review for the following 4 interim quarters
- Exclude all commuted contracts from paid and incurred loss development triangles
- Track loss movement excluding commuted contracts
- Work very closely with claims management
- Update paid and incurred Loss Development Factors (LDFs) and derive updated ultimate loss
  - Special emphasis on Expected incurred loss emergence for the next 12 months / next 4 quarters derived from incurred LDF curves (→ E)
  - Special attention on timing of future Expected paid loss derived from paid LDF curves (→ one key driver of commutation pricing)

4

## Reserving process of a (re)insurer in runoff (cont'd)



- Track Loss movement excluding commuted contracts

Actual vs. Expected (A/E) Analysis  
YTD as of December 2012  
(US\$ in millions) @ 1999 rates

Reserve Area	2011 Reserves			YTD Commuted(A)			2011 Adj'd Reserves			YTD Pd Ls			YTD Inc. Ls			YTD Dev.			Current Reserves		
	Total	Case	IBNR	Paid	Reserve	Ult.	Total	Case	IBNR	Actual	Expected	A/E	Actual	Expected	A/E	Ult.	Var. to Loss	Total	Case	IBNR	
Europe Reins - General Liability	22.0	15.8	6.1	-0.4	-0.2	-0.6	21.7	15.6	6.1	1.8	2.3	-0.6	0.8	1.1	-0.3	-0.5	-0.2	19.5	14.7	4.8	

5

## Reserving process of a (re)insurer in runoff (cont'd)



- Expected incurred loss emergence for the next 12 months / next 4 quarters derived from incurred LDF curves (→ E)

Line of Business Motor  
Type of Coverage Reinsurance - Non-Proportional

Yr	Fiscal Year Reported Loss								ITD Reported Loss	Current Year Selection				Fiscal Year Expected Reported Loss						
	2003	2004	2005	2006	2007	2008	2009	2010		2011	2012	Selected Ultimate Loss	IBNR	Sel. LDF	Normalized Factor	2013	2014	2015	2016	2017
1999	0	0	0	0	0	0	0	0	0	0	8.755	8.769	0	1.0039	0.0%	0	0	0	0	0
1999	19.176	253	(253)	0	0	0	(2.836)	0	(19.175)	0	27.231	27.231	0	1.0051	0.0%	0	0	0	0	0
1999	1.151	0	565	(565)	0	(500)	0	0	0	0	41.636	41.650	0	1.0005	0.0%	0	0	0	0	0
1991	(6.619)	4.425	(572)	(7,004)	0	26,123	39,543	23,517	17,245	156,940	579.613	581,563	4.675	1.0050	100.0%	1,144	632	679	533	433
1992	9.568	(13,150)	(340)	124	451	(53)	60	(4)	(5)	(170)	123,020	124,404	1.332	1.0112	100.0%	317	245	159	145	112
1993	30,028	(339)	(292)	(233)	(1,735)	(5,390)	21	0	0	0	110,545	110,548	0	1.0146	0.0%	0	0	0	0	0
1994	375	12,234	212	3,292	0	(8,052)	(3,727)	696	79,472	(45,107)	77,730	79,274	1.482	1.0151	100.0%	339	202	202	156	120
1995	19,758	426	113,392	(12,712)	(1,097)	19,259	1,513	25,327	(7,420)	(29,323)	271,401	278,140	6.739	1.0248	100.0%	1,540	1,191	920	710	547
1996	11,524	73,660	(8,822)	(7,252)	57,570	(30,665)	2,992	(11,417)	20,411	19,149	317,179	327,453	10.273	1.0324	100.0%	2,359	1,813	1,422	1,063	836
1997	17,343	(14,254)	4,869	68,498	20,056	(25,549)	(1,437)	(8,656)	53,523	58,374	759,229	800,715	23.439	1.0423	100.0%	7,305	5,724	4,432	3,429	2,649
1998	(29,979)	249,543	156,202	43,459	121,232	15,873	55,569	(39,511)	105,138	100,474	1,810,421	1,810,587	100.057	1.0553	100.0%	22,574	17,560	13,650	10,578	8,179
1999	(30,951)	27,565	50,068	18,329	(20,911)	21,683	1,633	929	12,052	(16,005)	315,725	338,582	22.858	1.0724	100.0%	5,119	4,000	3,115	2,419	1,874
2000	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0560	100.0%	0	0	0	0	0
2001	(2,245)	194,364	4,293	(32,325)	1,825	(645)	1,673	(429)	(33,255)	(4,358)	147,195	159,565	18.401	1.1250	100.0%	4,034	3,158	2,504	1,966	1,524
2002	87,008	200,167	278,113	(124,804)	71,134	20,233	(25,601)	(11,012)	58,420	(42,567)	653,165	761,011	127.847	1.1051	100.0%	23,279	18,541	14,651	11,509	8,992
2003	0	1,230,951	65,630	(192,050)	37,372	(83,178)	103,368	(61,013)	(25,149)	(12,100)	695,861	1,021,868	215.007	1.2191	100.0%	45,694	36,195	29,252	23,138	18,171
2004	0	1,971,867	125,947	(432,156)	213,700	(92,252)	51,936	78,361	20,310	1,248,044	1,628,000	363,956	226.5	1.000%	74,957	61,122	49,159	39,117	30,657	
2005	0	477,270	542,144	1,426,692	127,241	572,517	(25,115)	(176,852)	223,612	3,145,700	4,324,555	1,238,846	1.3038	100.0%	243,442	204,305	155,662	134,122	106,825	
	77,749	1,978,951	2,374,159	448,861	1,300,951	284,701	592,694	(154,060)	159,293	491,135	10,828,247	12,750,939	2,125,351			435,133	355,695	285,877	228,939	181,183

- Does your Expected emergence look plausible?

6

## Reserving process of a (re)insurer in runoff (cont'd)



- Special attention on timing of future Expected paid loss derived from paid LDF curves (→ one key driver of commutation pricing)

Line of Business	Motor	Type of Coverage	Reinsurance - Non-Proportional	Time	Discounted Factor																								
					1	2	3	4	5	6	7	8	9	10															
				Current Year Selection				Fiscal Year Expected Paid Loss																					
				Selected	Total	Set	Normalized																						
				Ultimate	Reserve	LDF	Factor	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022												
UY	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	8,759	0	1,440	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1999	0	0	0	0	0	0	0	0	0	0	27,251	0	1,452	0%	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	
1990	2,867	0	0	0	0	4	0	0	0	0	41,588	0	1,500	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	37,261	1,806	15,923	(1,871)	0	3,303	53,921	538	(1,039)	39,195	561,568	239,335	1,530	112.0%	12,367	8,483	8,584	8,356	7,872	7,429	7,021	6,548	6,209	5,879	5,579	5,279	4,979		
1992	3,343	(3,203)	324	45	(53)	(7)	122	59	(1,040)	(7)	124,404	2,808	1,570	8.3%	129	121	113	106	100	94	89	84	79	75	70	66	62		
1993	17,854	2,281	1,172	31,861	1,520	8,013	4,758	0	0	0	112,945	0	1,823	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1994	879	437	228	8,795	0	264	0	0	0	656	79,274	43,182	1,675	136.0%	2,030	1,891	1,795	1,651	1,547	1,453	1,368	1,287	1,215	1,148	1,085	1,024	968		
1995	9,726	11,742	7,502	30,482	608	29,503	14,348	8,824	15,543	8,542	278,140	80,958	1,731	68.0%	3,898	3,823	3,735	3,151	2,847	2,762	2,503	2,439	2,268	2,158	2,048	1,938	1,828		
1996	4,151	48,130	8,827	28,540	0	48,302	2,237	5,730	38,203	129	327,453	77,019	1,797	53.0%	3,921	3,529	3,273	3,254	2,811	2,808	2,409	2,348	2,207	2,078	1,949	1,820	1,691		
1997	15,523	145,254	58,573	63,242	63,558	55,843	4,149	(1,636)	5,579	15,964	832,718	292,487	1,878	69.0%	13,129	12,152	11,272	12,479	8,762	8,112	8,523	7,868	7,500	7,054	6,608	6,162	5,716		
1998	54,264	13,899	329,803	138,134	39,329	110,373	198,423	52,475	23,879	114,321	1,670,567	626,504	1,874	66.4%	32,528	30,545	27,810	25,787	23,590	22,300	20,554	19,505	18,280	17,183	16,126	15,069	14,012		
1999	30,341	3,300	73,929	6,796	34,477	1,005	0	0	22,138	1,073	338,582	195,304	2,067	63.0%	8,519	8,130	7,510	6,961	6,443	5,964	5,504	5,212	4,878	4,569	4,279	3,989	3,700		
2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0	0	0	0	0	0		
2001	0	0	25,561	(429)	8,128	(54)	65,154	(428)	7,873	15,512	155,558	29,342	2,470	24.0%	1,314	1,258	1,111	1,025	848	879	813	765	704	657	607	557	507		
2002	0	0	26,561	(429)	8,128	(54)	65,154	(428)	7,873	15,512	751,011	136,795	2,508	28.8%	7,809	7,164	6,513	6,356	5,511	5,162	4,797	4,450	4,106	3,853	3,509	3,266	3,023		
2003	0	0	0	0	20,334	3,415	472,138	28,564	17,127	13,479	1,201,808	648,531	2,934	81.6%	38,143	35,063	32,287	28,534	27,273	25,142	23,223	21,406	19,640	18,038	16,536	15,034	13,532		
2004	0	0	0	0	12,032	62,567	58,138	37,067	49,729	1,642,300	1,642,300	1,009,134	3,349	95.0%	65,451	62,369	58,549	51,643	45,820	43,363	39,369	36,370	34,026	31,571	29,116	26,661	24,206		
2005	0	0	0	0	0	8,372	12,057	82,367	299,349	4,808	4,304,058	3,878,472	3,482	121.0%	241,633	224,561	207,206	182,568	179,126	162,962	148,168	136,564	126,158	116,774	107,388	98,004	88,620		
2006	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0	0	0	0	0	0		
				183,626				225,631	608,125	403,137	264,373	306,960	914,225	347,180	908,624	274,652	12,790,598	7,387,872	428,856	387,389	366,924	337,818	311,393	287,214	268,728	245,042	227,726	211,626	

- Does your loss pay-out forecast look plausible?

7

## Reserving process of a (re)insurer in runoff (cont'd)



- Quarterly AvE reserve review:
  - Drill-down functionality (from LoB\_Underwriting Year (UY) to reinsurance contracts/insurance programs\_UY level) requires smart/sensible allocation of IBNR from LoB\_UY to reinsurance contracts/insurance programs
  - Slice and dice functionality
  - Closely monitor Actual incurred/paid loss movement <or> than a \$ threshold
  - Segregate tabular claims and large claims (actively interact with claim management)
  - Derive ceded/retroceded reserves by direct allocation of Gross IBNR/IBNYR to reinsurance contract/claim (this process needs to reflect the mechanism of retroceded/ceded reinsurance)

8

# Reserving process of a (re)insurer in runoff (cont'd)



## • Quarterly AvE reserve review:

Product Group	Original Reserve	Actual Reserve	Expected Reserve	A-E	Change in Reserve	Actual Reserve	Expected Reserve	A-E	Change in Reserve	Actual Reserve	Expected Reserve	A-E	Change in Reserve	Actual Reserve	Expected Reserve	A-E	Change in Reserve	Actual Reserve	Expected Reserve	A-E	Change in Reserve		
1708	27,941	-	-	-	27,941	27,941	27,941	27,941	27,941	27,941	27,941	27,941	27,941	27,941	27,941	27,941	27,941	27,941	27,941	27,941	27,941	27,941	27,941
1709	32,572	516	0	516	31,293	31,293	31,293	31,293	31,293	31,293	31,293	31,293	31,293	31,293	31,293	31,293	31,293	31,293	31,293	31,293	31,293	31,293	31,293
1500	78,876	17,538	(9)	17,547	61,847	61,847	61,847	61,847	61,847	61,847	61,847	61,847	61,847	61,847	61,847	61,847	61,847	61,847	61,847	61,847	61,847	61,847	61,847
1701	113,794	-	(9)	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784	113,784
1704	601,618	31,300	7,792	18,792	478,439	478,439	478,439	478,439	478,439	478,439	478,439	478,439	478,439	478,439	478,439	478,439	478,439	478,439	478,439	478,439	478,439	478,439	478,439
1705	438,240	21,303	23,320	21,410	416,943	416,943	416,943	416,943	416,943	416,943	416,943	416,943	416,943	416,943	416,943	416,943	416,943	416,943	416,943	416,943	416,943	416,943	416,943
1706	527,878	278,410	40,413	370,654	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220	1,500,220
1707	1,559,740	402,588	70,428	478,613	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400	2,004,400
1708	1,678,528	177,832	81,930	119,150	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679	1,484,679
1709	1,551,728	108,616	90,361	315,729	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213	1,479,213
1710	2,748,416	100,560	103,777	308,777	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639	2,645,639
1711	2,663,183	1,021,871	238,371	1,784,742	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626	1,010,626
1712	1,895,808	1,067,612	248,580	1,311,612	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130	1,230,130
1713	1,427,516	1,018,420	208,917	1,209,504	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919	1,040,919
1714	1,262,873	80,973	15,973	111,761	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112	1,151,112
1715	2,379,713	481,913	41,287	51,409	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413	2,377,413
1716	1,987,643	430,593	129,918	370,682	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725	1,556,725

TopDown and BottomUp process

# Commutation pricing considerations



- What should one consider?
  - Complete versus partial commutation
    - Cedant may elect partial commutation
    - Reinsurer's interest is normally to commute the entire relationship
  - Discount rate to be applied to future expected paid losses
    - Risk free rate? or
    - Expected rate of return on invested assets supporting the liabilities to be commuted?
  - Loss incurred and loss pay-out patterns
    - Cedant specific patterns?
    - LoB patterns? or
    - Industry proxy?
    - A combination of the above?
  - Collateralized cedant reserves versus non collateralized
  - Treatment of unpaid balances and large claims in commutation pricing
  - Impact of commutation on reinsurance assets

Commutation pricing considerations (cont'd)



- What should one consider?
  - "In and Out" effect of the commutation on the company's portfolio
    - Should the commutation be priced in isolation? Or
    - Should one also consider the effect of the commutation on the remaining reserves of the company?

Global Reserving Group	U.Y.	Incurred / Total Loss	Case / Total Loss	A Accounts to be commuted					B Total tab including Accounts to be commuted					C Total tab excluding Accounts to be commuted					D = B - C Difference (+ / -)			
				Incurred Issues	Case Reserves	Selected IBNR	Full/Total Reserves	Total Reserves	Incurred Issues	Case Reserves	Selected IBNR	Total Reserves	Incurred Issues	Case Reserves	Selected IBNR	Total Reserves	Incurred Issues	Case Reserves	Implied IBNR	Total Reserves		
				NA.Misc. Non Prop	1958	0.2%	0.2%															
NA.Misc. Non Prop	1959	0.2%																				
NA.Misc. Non Prop	1960	0.2%	0.2%																			
NA.Misc. Non Prop	1961	0.2%																				
NA.Misc. Non Prop	1962	0.2%	0.2%																			
NA.Misc. Non Prop	1963	13.3%	0.2%		241,177	0	0	241,177	0	1,813,508	32,204	4,431	26,942	1,578,311	32,204	3,849	30,054	241,177	0	318	568	
NA.Misc. Non Prop	1964	22.3%	86.9%		427,463	158,250	2,637	268,453	351,706	1,551,449	183,062	8,373	182,456	1,451,586	24,053	7,226	31,339	427,463	158,250	2,097	161,087	
NA.Misc. Non Prop	1965	42.3%	92.7%		658,828	51,326	7,218	608,562	58,624	1,559,833	55,811	15,476	70,828	900,245	4,026	0	4,026	658,828	51,326	15,476	68,822	
NA.Misc. Non Prop	1966	23.4%	100.0%		528,439	15,093	0	506,356	13,082	2,213,729	13,093	50,148	63,711	1,900,279	0	0	0	528,439	15,093	50,148	63,711	
NA.Misc. Non Prop	1967	22.3%	8.2%		178,298	15,122	0	167,166	16,171	1,485,845	136,812	32,364	228,854	1,512,247	165,808	26,224	190,012	178,298	15,122	26,001	42,812	
NA.Misc. Non Prop	1968	26.2%	43.1%		1,774,566	337,283	365,133	1,437,314	702,406	6,937,513	534,570	338,728	874,297	3,061,993	197,817	111,580	308,897	1,774,566	337,283	238,147	563,400	
NA.Misc. Non Prop	1969	8.7%	53.0%		706,206	26,146	24,166	680,034	52,331	8,061,468	47,622	47,622	85,205	7,976,262	21,426	21,426	42,872	706,206	26,146	26,166	52,332	
NA.Misc. Non Prop	2000	35.1%	46.8%		787,952	143,846	278,259	644,056	421,056	2,346,207	328,917	206,127	574,844	1,468,825	164,821	65,018	229,930	787,952	143,846	221,068	344,323	
NA.Misc. Non Prop	2001	53.0%	63.9%		936,179	226,428	374,429	610,741	491,364	1,728,618	395,249	232,793	607,514	803,839	217,813	41,423	169,213	936,179	226,428	139,361	427,399	
NA.Misc. Non Prop	2002	0.2%	0.2%							452,336	139,138	70,875	252,113	450,336	133,138	29,251	168,949	0	0	41,724	41,724	
NA.Misc. Non Prop	2003	0.2%	0.2%							115,048	0	0	115,048	0	0	0	0	0	0	0	0	
<b>Total NA.Misc. Non Prop</b>		<b>35.7%</b>	<b>32.4%</b>		<b>6,216,117</b>	<b>979,221</b>	<b>905,862</b>	<b>5,310,933</b>	<b>1,824,179</b>	<b>35,065,189</b>	<b>1,858,496</b>	<b>(1,039,514)</b>	<b>2,907,812</b>	<b>33,861,071</b>	<b>895,371</b>	<b>(2,068,068)</b>	<b>2,121,341</b>	<b>6,216,117</b>	<b>979,221</b>	<b>(763,647)</b>	<b>2,121,341</b>	

- Is \$951K IBNR too high?

Commutation pricing considerations (cont'd)



- Commutation Model:
  - Needs to be efficient and practical
    - Minimize travel time to extract contracts in scope
    - Establish a full inventory of contracts in scope vs. entire relationship
    - Compare historical loss experience of the cedant to company's historical loss experience (cedant's LDFs vs. company's vs. industry proxy's), (in and out effect of the commutation to the rest of the company portfolio)
    - Quantify # and size of open claims
    - Quantify # and size of open precautionary claims reported to the company
    - Segregation of large claims and tabular claims
  - Treatment of unpaid balances
  - Payout patterns for tabular claims and large claims
  - Provide technical price at several IRRs/discount rates

# Commutation pricing considerations (cont'd)



- Commutation Model:

Unaudited Balance Sheet		IBNR		Commutation Price in USD		Annual Cash Flows												
IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR	IBNR
IBNR	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000

# Commutation pricing considerations (cont'd)



- Commutation Model:

### Commutation Calculation

	USD Currency
1) Case Reserves	2,060,182
2) Selected IBNR	4,170,872
3) Unpaid Balances	677,000
4) Selected Total Estimated Reserves	6,908,054

### Commutation Price

IRR	USD Currency
2.0%	6,045,422
4.0%	5,373,736
6.0%	4,843,030
8.0%	4,417,787

### Incurred Losses Development in Recent Years:

Incurred in 2013	82,385
Incurred in 2012	(1,448,087)
Incurred in 2011	196,398
Incurred in 2010	1,407,262
Incurred in 2009	2,315,630
Incurred in 2008	4,816,742

IBNR Booked @ prior quarter	6,100,257
IBNR Selection	4,170,872

### Means of consolidation:

- Legal Liabilities transferred (usually require regulatory approval)
  - Sale/Acquisition of a company/legal entity
  - Novation
  - Transfer part of a business
  
- Legal Liabilities transferred (private arrangement between 2 parties)
  - Reinsurance to Close (RITC)
  - Loss Portfolio Transfer (LPT)
  - Adverse Development Cover (ADC)
  - LPT and ADC combined

15

### Legal and accounting requirements:

- UK legal requirements:
  - When legal liabilities are unchanged
    - Policyholders normally not involved
    - Regulatory permission normally not required
  - When legal liabilities are transferred
    - The transfer scheme needs approval from the court, not necessarily from regulators (FSA)
  
- UK accounting effects:
  - For a traditional LPT: cedant net liabilities are reduced by the nominal value of the transferred reserves and assets are reduced by the premium paid (gross liability remains unchanged on the BS of the cedant)
  - Reinsurance transactions involving only timing risk can be accounted for as reinsurance
  - The reinsurer may reserve the transferred liabilities at a different level to that agreed at the pricing of the transaction (mirror accounting not required)

16



### Legal and accounting requirements:

- US legal requirements
  - Normally set at the state level
- US accounting effects:
  - Most significant accounting rules FASB 113 (applies to public company reporting in accordance with US GAAP)
  - Forbid immediate recognition gains from ceding reinsurance contracts unless ceding company's obligations are extinguished
  - Differentiate between long (e.g. Life) vs. short (most P&C contracts) duration contracts
  - FASB 113 requires transfer of significant risk (timing and underwriting risks) in order for a contract to be recognized as reinsurance
  - For retrospective contracts (LPT/ADC) underwriting profit resulting from the ceded reserves and the reinsurance premium must be recognized over the entire period of the contract

17

### LPT/ADC

Basic principle: transfer outstanding claims to a reinsurer

Reinsurer agrees to pay claims from a retention level (usually lower than the existing reserves) up to a pre-set limit (at or a little above existing reserves)

Reinsurer assesses probable pay-out of claims and receives a premium equal to the sum of the discounted value of the expected claim payment + risk charge and fee

Adverse Development Cover protects against adverse development of claim levels beyond current level up to a pre-set limit

Reinsurer takes timing and investment risks and may take reserving/underwriting risks

Particularly suitable for liability portfolios with long settlement periods and subject to volatile reserve development (e.g. Asbestos, Pollution, WC liabilities)

18

## LPT/ADC – risk transfer requirements under US GAAP:

- 1) Underwriting risk: the risk that the premiums collected (generally set to cover expected claims plus transaction costs) are insufficient to cover the actual claims payments;
  - 2) Credit risk: the risk that a (re)insurer will not fully satisfy all of its contingent obligations to its cedants;
  - 3) Investment risk: the risk that the income generated by a (re)insurer from the invested premium will be below the expected income reflected in the (re)insurer's premium pricing;
  - 4) Timing risk: the risk that actual paid loss occurs earlier than expected and that the invested assets including investment income are insufficient to fund those claims when claims need to be paid
- In order for a retrospective contract to qualify as a true reinsurance contract under US GAAP, it must have material risk transfer of all 4 of the above categories
  - A LPT without ADC features embedded in the contract would not qualify as a reinsurance contract under US GAAP, since it would not have underwriting risk

## LPT/ADC – What constitutes material risk transfer under US GAAP?

The 10/10 rule of thumb: if there is at least a 10% probability that the reinsurer would suffer a loss of at least 10%, the policy was deemed to have material risk transfer (this used to be the norm)

Following some widely publicized controversies about finite/structured contracts, many favor a 15/15 rule and in some instances as much as 25/25 rule

In addition a more precise definition of the 10/10 rule of thumb: if there is at least a 10% probability that the reinsurer would suffer **Present Value (PV) loss** of at least 10%, the policy was deemed to have material risk transfer

## Runoff Consolidation (cont'd)

Alea

### LPT/ADC – 10/10 rule example

Premium 95,000  
 Expected loss at 90% percentile loss 120,000  
 Discount rate 4.0%

Dev. period in years	Transaction Premium Cost	Expected Loss Pay-out pattern	Expected Loss Pay-out	Incremental Cash Flow	Incremental NPV(Cash Flow)	Cumulative NPV(Cash Flow)
0	95,000	(2,500)		92,500	92,500	92,500
1			5% (6,000)	(6,000)	(5,883)	86,617
2			10% (12,000)	(12,000)	(11,314)	75,302
3			15% (18,000)	(18,000)	(16,319)	58,983
4			20% (24,000)	(24,000)	(20,922)	38,062
5			15% (18,000)	(18,000)	(15,088)	22,974
6			10% (12,000)	(12,000)	(9,672)	13,302
7			7% (8,400)	(8,400)	(6,510)	6,793
8			8% (9,600)	(9,600)	(7,154)	(361)
9			5% (6,000)	(6,000)	(4,289)	(4,660)
10			5% (6,000)	(6,000)	(4,134)	(8,793)
Total		100%	(120,000)	(27,500)	(8,793)	(8,793)

NPV(Cash flow) = (8,793)  
 NPV(Premium pd to reinsurer) = 95,000  
 Test: NPV(Cash flow)/NPV(Premium pd to reinsurer) = 9.3% = 8793 / 95000  
 Does not satisfy risk transfer criterion if the 10/10 rule is applied

21

## Runoff Consolidation (cont'd)

Alea

### LPT/ADC – 10/10 rule example

Premium 95,000  
 Expected loss at 90% percentile loss 120,000  
 Discount rate 3.5%

Dev. period in years	Transaction Premium Cost	Expected Loss Pay-out pattern	Expected Loss Pay-out	Incremental Cash Flow	Incremental NPV(Cash Flow)	Cumulative NPV(Cash Flow)
0	95,000	(2,500)		92,500	92,500	92,500
1			5% (6,000)	(6,000)	(5,898)	86,602
2			10% (12,000)	(12,000)	(11,396)	75,206
3			15% (18,000)	(18,000)	(16,517)	58,689
4			20% (24,000)	(24,000)	(21,277)	37,412
5			15% (18,000)	(18,000)	(15,418)	21,993
6			10% (12,000)	(12,000)	(9,931)	12,062
7			7% (8,400)	(8,400)	(6,717)	5,345
8			8% (9,600)	(9,600)	(7,417)	(2,072)
9			5% (6,000)	(6,000)	(4,479)	(6,551)
10			5% (6,000)	(6,000)	(4,327)	(10,878)
Total		100%	(120,000)	(27,500)	(10,878)	(10,878)

NPV(Cash flow) = (10,878)  
 NPV(Premium pd to reinsurer) = 95,000  
 Test: NPV(Cash flow)/NPV(Premium pd to reinsurer) = 11.5% = 10878 / 95000  
 Does satisfy risk transfer criterion if the 10/10 rule is applied

22

## Sources and reference papers:

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- Sources and reference papers:
  - AAA reinsurance attestation supplement 20-1: Risk transfer testing practice note (AAA Committee on Property and Liability Financial Reporting (November 2005))
  - Non-traditional solutions for Liability Exposures by Stuart Shepley
  - The Uses and Abuses of Finite Risk Reinsurance by Christopher L. Culp and J.B. Heaton (A Morgan Stanley Publication, Summer 2005)
  - Loss Portfolios Transfers (2002 Giro Working Party Paper)
  - Risk Transfer Training (Introduction and Risk Metrics) Guy Carpenter October 2008

23

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# Is there life after runoff?

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CAS Seminar on Reinsurance  
June 6, 2013  
Southampton, Bermuda